

**What is claimed is:**

1        1.        A method comprising:  
2        providing a design-under-test (DUT) configuration file comprising a  
3        specification of bus transaction types and parameters corresponding to said DUT; and  
4        processing said configuration file to generate a test case comprising bus  
5        transactions for verification of said DUT.

1        2.        The method of claim 1, wherein said processing step further comprises  
2        evaluating rules in said configuration file to include or exclude selected ones of said  
3        bus transactions from said test case.

1        3.        The method of claim 1, wherein said processing step comprises  
2        converting said specification into a plurality of combinations of said parameters.

1        4.        The method of claim 4, comprising applying said bus transactions to  
2        said DUT for verification.

1        5.        A method comprising:  
2        describing a DUT in a configuration file using a condensed syntax;  
3        generating a test case for verification of said DUT by converting said  
4        condensed syntax into an enumeration of possible parameter combinations for bus  
5        transactions of said DUT.

1        6.        The method of claim 5, further comprising including rules in said  
2        configuration file to include or exclude parameter combinations from said  
3        enumeration.

1        7.        The method of claim 5, wherein said syntax specifies a range of  
2        parameter values for said bus transactions.

1        8.        The method of claim 5, wherein said syntax specifies transaction types,  
2        a set of parameters for each transaction type, and directives for determining a mode of  
3        said converting.

1 9. The method of claim 8, wherein said directives cause a value for said  
2 parameters to be stepwise incremented.

1 10. The method of claim 8, wherein said directives cause values for said  
2 parameters to be evaluated as a list.

1 11. The method of claim 8, wherein said directives cause said transaction  
2 types to be selected at random.

1 12. A computer-usable medium storing computer-executable instructions,  
2 said instructions when executed implementing a process comprising:

3 evaluating a syntax of a DUT configuration file including statements defining  
4 transaction types and parameters corresponding to said DUT; and  
5 generating bus functional language statements from said syntax.

1 13. The computer-usable medium of claim 11 wherein said configuration  
2 file further includes rules for including or excluding selected bus functional language  
3 statements from being generated.

1 14. The computer-usable medium of claim 12 wherein said evaluating and  
2 generating steps comprise:

3 testing a parameter combination generated from said configuration file against  
4 said rules; and

5 outputting said parameter combination in a bus functional language statement  
6 when said parameter combination is not excluded by said rules.

1 15. A system comprising:

2 a memory including computer-executable instructions;

3 a processor coupled to said memory for executing said instructions; and

4 a configuration file for a DUT including bus transaction types and parameters  
5 corresponding to said DUT;

6 wherein said instructions process said configuration file to generate bus  
7 transactions for verification of said DUT.

1            16.    The system of claim 15, wherein said configuration file includes rules

2    ~~for including or excluding selected bus transactions from being generated.~~

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